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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/493,984	01/28/2000	Robert S. Eisenbart	18926-003220US	2907

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EXAMINER

SIMITOSKI, MICHAEL J

ART UNIT	PAPER NUMBER
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2134

DATE MAILED: 06/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/493,984

Applicant(s)

EISENBART ET AL.

Examiner

Michael J Simitoski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 21-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 21-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5/20/04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. The remarks/amendment of 5/12/04 has been received and considered.
2. The IDS of 5/20/04 has been received and considered.
3. Claims 1-19 & 21-23 are pending.

Information Disclosure Statement

4. Applicant has cited U.S. Patent 5,825,880 and Chinese document 1192834. Because the U.S. Patent appears to be related to the foreign reference, the U.S. reference will be treated as the statement of relevance of the foreign reference.

Response to Arguments

5. Regarding the Japanese Patent reference, a translation is included with this Office Action and the citations within the rejections have been updated to reflect locations in the translated document rather than the previously relied upon machine translation.
6. Regarding applicant's remarks on page 10, ¶2, applicant argues "Banker '938 and Fischer would seem to require that [the payload and signature] be integral during transport". Banker '938 and Fischer have no requirement that the signature be separate or integral with the "payload" in terms of functionality. Banker '938 discloses that multiple pieces of information are sent to subscribers, some of which are digitally signed. Fischer teaches that it is useful to create a signature over multiple pieces of data to associate them. Yoneda teaches that separating a signature from a document is useful because it is difficult to process the file when the signature is appended and to allow detection of modifications to the document (¶7-10, ¶23 & ¶46).

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7. Regarding applicant's remarks on page 10, last ¶ - page 11, ¶1, applicant argues that the teachings of Banker '364 would destroy the claimed invention if applied to the other references. The Examiner disagrees. Banker '364 simply teaches that regardless of the current state of a set-top-box, important information can be received using out-of-band channels (distinct pathways). This allows the receipt of entitlements, etc. regardless of the current state of the receiver. The set-top-box receives all of the same information, but through different pathways, rather than a single one. Since there still exists a sender and a receiver, a signature can still be both created and verified.

8. Regarding the term "separately" in the claims. The data transmitted, as described by Banker, is packetized data sent in a serial fashion. Therefore, any piece of information is sent "separately" from any other piece of information.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1, 3, 6, 8 & 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,005,938 to Banker et al. (Banker) in view of U.S. Patent 5,005,200 to Fischer in further view of Japanese Patent JP409311854A to Yoneda (translation).

Regarding claims 1, 6, 8, 11 & 13 Banker discloses sending a service instance and an entitlement control message (ECM) to a customer in a distributed network (col. 1, lines 64-67 &

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col. 2, lines 1-32). The ECM contains a MAC (signature) of the contents of the ECM (Fig. 5) and the service instances and ECMs are sent separately over the network to the subscribers (col. 6, lines 36-44). Banker's system lacks generation of a digital signature over both the ECM and service instance. Fischer teaches that by digitally signing multiple objects together, the objects are verifiable and there is an indication of the relationship between each object and the group (col. 7, lines 63-67). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to digitally sign both the software object and the rules file in the Banker reference. One of ordinary skill in the art would have been motivated to perform such a modification to maintain verifiability while creating an association between the two, as taught by Fischer (col. 7, lines 63-67). The combination of Banker and Fischer does not explicitly teach sending a signature separate from the data. However, Yoneda teaches that it can be difficult to remove a signature from a document for verification purposes (§§7-10, §23 & §46) and this is remedied by creating the signature separately from the document (§§7-10, §23 & §46). Yoneda further teaches that separating the signature and data is beneficial because alteration of the file is detectable (§§7-10, §23 & §46). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to send the data and signature separately. One of ordinary skill in the art would have been motivated to perform such a modification because there is no need to remove the signature, making verification easier, from the data and to detect alteration of data, as taught by Yoneda (§§7-10, §23 & §46).

Regarding claim 3, Banker, as modified above, discloses a signature packet and an object (Fischer, Fig. 3), where the signature packet contains fields over which, in combination with the

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object, the signature is created. The signature is appended to the signature packet and the object is sent separately (Fischer, Fig. 3 & col. 16, lines 25-48).

Regarding claim 12, Banker discloses including dates of validity in the authorization data (Fig. 2).

11. Claims 2, 4, 9 & 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banker in view of Fischer in view of Yoneda as applied to claims 1 & 8 above, and in further view of U.S. Patent 6,256,393 to Safadi et al. (Safadi). Banker discloses a system, as modified above, that verifies broadcasted information, but lacks specifically receiving software objects. Safadi teaches a system wherein software objects are verified, then downloaded in response to a need for system cable operators to maintain control of the features and applications that run on set-top terminals (col. 1, lines 19-27 & col. 2, lines 13-39). Safadi's invention determines if the software object is authorized to use the set-top terminal resources (col. 2, lines 43-60) and if the object is not authorized, the object is not executed (col. 2, lines 61-63). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to expand Banker's system to transmit software objects as well as broadcast information. One of ordinary skill in the art would have been motivated to perform such a modification to satisfy a need for cable operators to maintain set-top terminals, as taught by Safadi (col. 1, lines 19-27 & col. 2, lines 13-39).

12. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Banker in view of Fischer in further view of Yoneda as applied to claim 1 above, and in further view of U.S. Patent

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6,012,144 to Pickett. Banker discloses a system, as modified above, but lacks delaying part of the transmission by a predetermined amount of time. Pickett teaches that by breaking messages into pieces and sending them at different times, intercepting all of the pieces of the message is virtually impossible (col. 3, lines 1-18). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Banker system to delay transmission of one of the pieces of information. One of ordinary skill in the art would have been motivated to perform such a modification to render interception of both pieces of information virtually impossible, as taught by Pickett (col. 3, lines 1-18).

13. Claims 7 & 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banker ('938) in view of Fischer in further view of Yoneda as applied to claims 1 and 8 above, and further in view of U.S. Patent 5,247,364 to Banker et al. (Banker ('364)). Banker ('938) discloses a system, as modified above, but lacks sending information over different transmission pathways. Banker ('364) teaches that unlike in-band transactions, out-of-band subscriber terminals receive data over this channel no matter what the channel the subscriber is tuned to (col. 1, lines 28-44 & col. 2, lines 55-68). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include authorization information on a different transmission pathway. One of ordinary skill in the art would have been motivated to perform such a modification to gain the benefit of delivery regardless of which channel a subscriber was tuned to, as taught Banker ('364) (col. 1, lines 28-44 & col. 2, lines 55-68).

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14. Claims 14, 15 & 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banker ('938) in view of U.S. Patent 5,247,364 to Banker et al. (Banker ('364)) in further view of Yoneda. Banker ('938) discloses a system as modified above, but lacks sending information over different transmission pathways. Banker ('364) teaches that unlike in-band transactions, out-of-band subscriber terminals receive data over this channel no matter what the channel the subscriber is tuned to (col. 1, lines 28-44 & col. 2, lines 55-68). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include authorization information on a different transmission pathway. One of ordinary skill in the art would have been motivated to perform such a modification to gain the benefit of delivery regardless of which channel a subscriber was tuned to, as taught Banker ('364) (col. 1, lines 28-44 & col. 2, lines 55-68). As modified, Banker does not explicitly teach sending a signature using a third pathway different from at least the first or second pathway. However, Yoneda teaches that it can be difficult to remove a signature from a document for verification purposes (§7-10, §23 & §46) and this is remedied by creating the signature separately from the document (§7-10, §23 & §46). Yoneda further teaches that separating the signature and data is beneficial because alteration of the file is detectable (§7-10, §23 & §46). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to send the signature over a third pathway, different from at least the first or second pathway. One of ordinary skill in the art would have been motivated to perform such a modification because there is no need to remove the signature, making verification easier, from the data and to detect alteration of data, as taught by Yoneda (§7-10, §23 & §46).

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15. Claims 16 & 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banker ('938) in view of Banker ('364) in further view of Yoneda as applied to claim 15 above, and further in view of U.S. Patent 6,157,721 to Shear et al. (Shear). Banker discloses a system, as modified above, but lacks using multiple signatures, with multiple signing algorithms, to sign and verify the data. Shear teaches that using several dissimilar digital signature algorithms can reduce vulnerability from algorithm compromise (ABSTRACT). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a plurality of signatures with different signing algorithms in the authorization message and to use one or more of the signatures to validate the message. One of ordinary skill in the art would have been motivated to perform such a modification to reduce vulnerability from algorithm compromise, as taught by Shear (ABSTRACT).

16. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Banker ('938) in view of Banker ('364) in further view of Yoneda as applied to claim 14 above, and further in view of U.S. Patent 6,256,393 to Safadi et al. (Safadi). Safadi teaches that using a tiered structure (grouping of programs or services) for access control in a broadcast distribution system reduces bandwidth requirements (col. 4, lines 35-65). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Banker's ('364) design to use tiering. One of ordinary skill in the art would have been motivated to perform such a modification to gain the benefit of reduced bandwidth requirements, as taught by Safadi (col. 4, lines 35-65).

17. Claims 22 & 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banker in view of Fischer in further view of Yoneda as applied to claims 1 and 8 above, and further in view of U.S. Patent 6,157,721 to Shear et al. (Shear). Banker discloses a system, as modified above, that uses digital signatures for verification, but uses only one per data. Shear teaches that using several dissimilar digital signature algorithms can reduce vulnerability from algorithm compromise (ABSTRACT). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a plurality of signatures with different signing algorithms in Banker's data and to use one or more of the signatures to validate the data. One of ordinary skill in the art would have been motivated to perform such a modification to reduce vulnerability from algorithm compromise, as taught by Shear (ABSTRACT).

Conclusion

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Simitoski whose telephone number is (703)305-8191. The examiner can normally be reached on Monday - Thursday, 6:45 a.m. - 4:15 p.m.. The examiner can also be reached on alternate Fridays from 6:45 a.m. - 3:15 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse can be reached on (703)308-4789.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, DC 20231

Or faxed to:

(703)746-7239 (for formal communications intended for entry)

Or:

(703)746-7240 (for informal or draft communications, please label "PROPOSED" or "DRAFT")


Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA 22202, Fourth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9000.

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MJS
June 21, 2004



NORMAN M. WRIGHT
PRIMARY EXAMINER